C.4

MEMO TO: City Council

FROM: Rosemarie Ives, Mayor

DATE: February 1, 2005

SUBJECT: **APPROVAL OF SUPPLEMENTAL AGREEMENT NO. 1 FOR ENGINEERING SERVICES, NE 116TH CULVERT REPLACEMENT, PROJECT NO. 03-SD-42/100387**

I. RECOMMENDED ACTION

Move to approve Supplemental Agreement No. 1 with Reid Middleton for final design services for the NE 116th Culvert Replacement project, Project No. 03-SD-42 /100387, in an amount not to exceed $235,000 including contingencies; authorize staff to acquire necessary right-of-way or easements for roadway construction and utility underground conversion, if required; and authorize the Mayor to sign the agreement.

II. DEPARTMENT CONTACT PERSONS

David Rhodes, Director of Public Works	556-2705
Bill Campbell, City Engineer/Assistant Director of Public Works	556-2733
Ron Grant, Construction Division Manager	556-2742
Steve Gibbs, Project Manager	556-2729

III. DESCRIPTION

This project will replace the existing 42-inch corrugated metal pipe (CMP) culvert that crosses NE 116th Street at approximately 165th Avenue and accommodates an unnamed Class 2 stream. The existing culvert is approximately 27 feet below the NE 116th Street roadway and was first evaluated in 1997. It was found to be in very poor condition with severe corrosion problems and significant deflection. As an immediate repair the culvert was slip-lined in 2000 by City crews and as a condition of the Department of Fisheries permit, the City

agreed to pursue a complete culvert replacement within five years. To meet fish passage requirements, a twelve-foot wide by nine foot high concrete box culvert will be constructed.

The supplemental agreement supports the expanded scope of this project necessary to accommodate additional roadway improvements for the NE 116th Street corridor between 162nd Avenue NE and 168th Avenue NE. These corridor improvements will be designed in accordance with the recently approved NE 116th Street Corridor Design Report. In general, the roadway section within the new project limits will be two travel lanes, two bike lanes, a sidewalk on the south side, and a combined sidewalk/trail on the north side. These roadway improvements will closely match developer improvements that have been constructed on the north side of NE 116th Street just east of the culvert. No roadway improvements will be constructed on the north side between the Northstar Development and 162nd Avenue NE due to pending development action. The limits of 162nd Avenue NE to the west and 168th Avenue NE to the east, were selected based on identified school walk routes, upcoming or recently completed development projects, and appropriate termination locations for the overhead utility conversion.

During the culvert replacement phase of this project it will be necessary to close NE 116th Street and implement a detour. The planned detour route will be similar to approved detour routes for work previously completed on this corridor. This project will also incorporate the recommended NE 116th Street roadway profile lowering in the vicinity of 169th Avenue NE, and will be performed during the roadway closure required for the new culvert installation. Staff anticipates that the closure and detour will need to be in place for approximately two to three months. Every effort will be made to minimize the duration.

The attached Consultant Agreement is the City's standard supplemental agreement form. The City Attorney and Risk Manager will review and approve the agreement prior to signature by the Mayor.

IV. IMPACT

A. Service Delivery: This project will replace a severely eroding culvert, improve fish passage, and will improve the safety and operations of pedestrian and bicycle traffic within the project construction limits.

B. Fiscal: Estimated costs for design and construction are shown below.

Estimated Project Costs	
Preliminary Design	$220,000
Final Design	
Reid Middleton	235,000
City Administration	50,000
Right-of-Way	100,000
Total Design Costs	$605,000
Construction	
Estimated Construction	2,580,000
Construction Engineering, Testing, Misc.	210,000
Overhead Utility Conversion	520,000
Contingency	500,000
Total Costs	**$4,415,000**
Project Funding	
Stormwater CIP	$1,925,000
Developer Contributions	250,000
Transportation CIP	2,240,000
Total Funding	**$4,415,000**

V. ALTERNATIVES

Council could choose to not approve the Supplemental Agreement. However, this action would eliminate or delay the proposed additional corridor improvements and utility conversion. The culvert project must be constructed in 2005 to fulfill assurances to the Washington State Department of Fish and Wildlife that the City would replace this culvert by 2005.

VI. TIME CONSTRAINTS

Agreement Approval	February 1, 2005
Complete Design	Spring, 2005
Advertise for Bids	April, 2005

VII. LIST OF ATTACHMENTS

A. Vicinity Map
B. Supplemental Agreement No. 1

s/s
David Rhodes, Director of Public Works

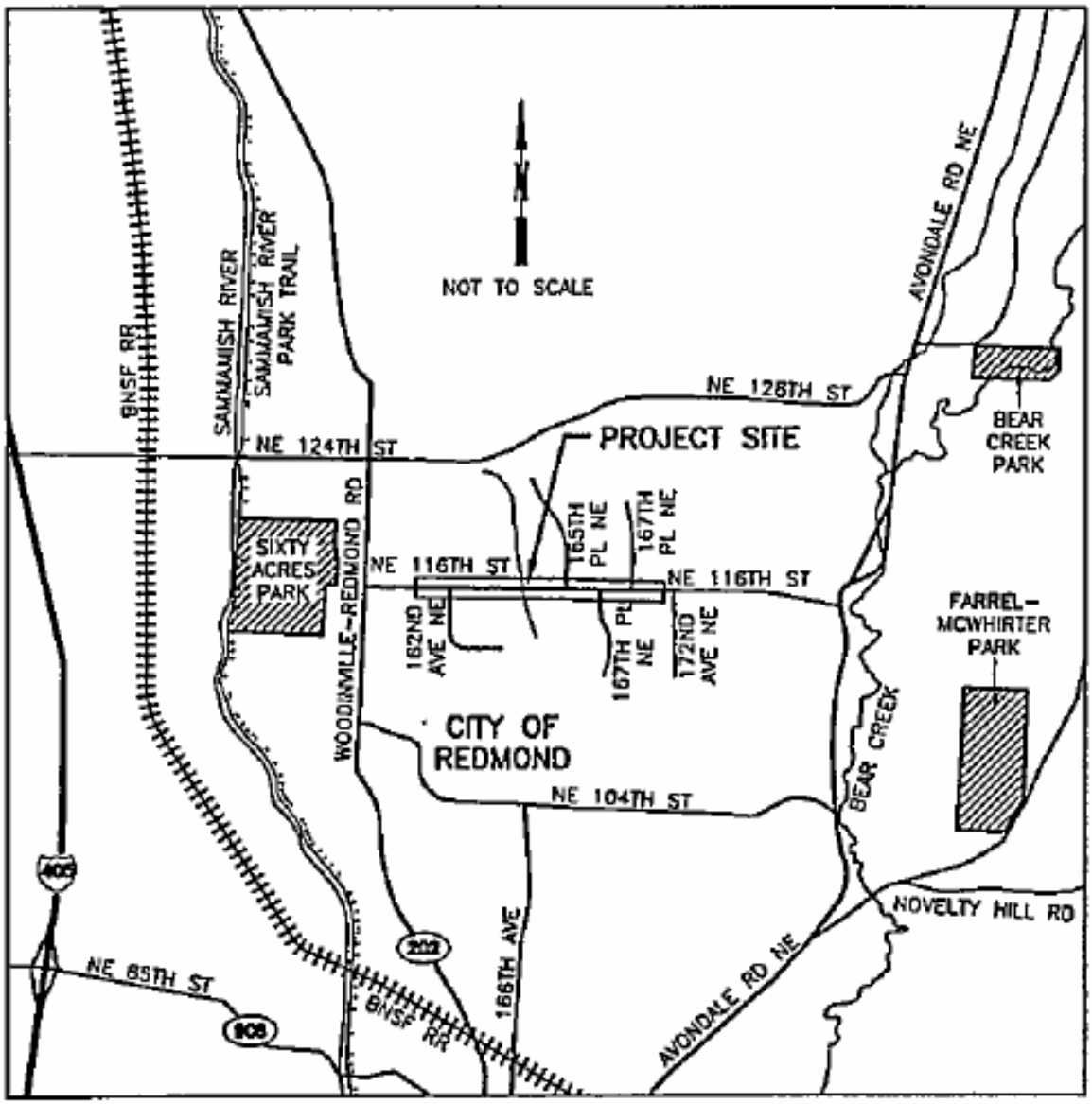
1/21/05
Date

Approved for Council Agenda s/s
Rosemarie Ives, Mayor

1/25/05
Date

ATTACHMENT A

NE 116th Culvert Replacement



VICINITY MAP

ATTACHMENT B

NE 116th Culvert Replacement
Project No. 03-CI-42/100387

SUPPLEMENTAL AGREEMENT NO. 1

This SUPPLEMENTAL AGREEMENT, made and entered into this ____ day of _____, 20___ between the City of Redmond, Washington, hereinafter called the CITY, and Reid Middleton, hereinafter called the CONSULTANT, amends an earlier Agreement (AGREEMENT) dated May 13, 2004.

WHEREAS the CITY requires additional engineering, services related to the above mentioned project, and pursuant to Section XIV (Extra Work) of the AGREEMENT;

NOW THEREFORE, it is mutually agreed that the terms, stipulations, and conditions of the original AGREEMENT shall be binding upon the parties hereto except insofar as amended by this SUPPLEMENTAL AGREEMENT as follows:

ITEM NO. 1: SCOPE OF WORK

Section II, SCOPE OF WORK of the AGREEMENT shall be amended by the additional tasks summarized in Exhibit A-1, attached hereto.

ITEM NO. 2: PAYMENT

Section V, PAYMENT, shall be supplemented to compensate the CONSULTANT for the items of extra work provided in connection with the work described in Exhibit A-1, attached hereto.

A breakdown of the CONSULTANT'S cost proposal is attached hereto as Exhibit B-1. By this reference the exhibit is made a part of this SUPPLEMENTAL AGREEMENT.

The "Maximum Amount Payable" involved on page 1 of the AGREEMENT is hereby modified to $375,000.

Summarized below are the costs as listed in the original AGREEMENT and as modified by this SUPPLEMENTAL AGREEMENT.

	Summary		
Description	**Original Agreement**	**Supplement No. 1**	**Total**
Labor Cost	$89,410	$198,112	$287,522
Reimbursables	$13,563	$6,063	$19,626
Sub-consultants	$31,461	$17,700	$49,161
Total	$134,434	$221,875	$356,309
Contingency	$5,566	$13,125	$18,691
Grand Total	$140,000	$235,000	$375,000

ITEM NO. 3: COMPLETION DATE

The completion date on page 1 of the AGREEMENT shall be modified to Decemeber 31, 2005.

EXECUTION

IN WITNESS WHEREOF, the parties have executed this SUPPLEMENTAL AGREEMENT by having their representatives affix their signatures below.

Reid Middleton

By_____

_____
(Title)

CITY OF REDMOND

By _____
ROSEMARIE IVES, Mayor

Attested:

By_____
City Clerk

Approved as to Form:

By_____
City Attorney

EXHIBIT A-1

SCOPE OF SERVICES
PRELIMINARY & FINAL DESIGN
NE 116th Street Culvert Replacement and Corridor Improvements Project
Project No. 03-SD-42/100387

I. PROJECT UNDERSTANDING

The City of Redmond (City) desires to improve NE 116th Street from162nd Avenue NE to 350-feet west of the 169th Court NE intersection, or approximately project Station 38+60. These improvements will be constructed in conjunction with the NE 116th Street culvert replacement project (Project # 03-SD-42), located west of 165th Place NE. The improvements will be in accordance with City's approved corridor plan for NE 116th Street. The project will include design of a storm drainage conveyance system, storm water quality and detention, walls, conversion of overhead utility systems to underground facilities, relocation of existing utilities, sewer main extension, street lighting, pavement widening, landscaping restoration, bicycle lanes, curb, gutter, sidewalks, and a trail. On the north side of the road, the sidewalk and trail will match the existing frontage improvements for the Northstar and Sunny Hill Farm housing plats; the trail and sidewalk will terminate approximately 300-feet west of the 165th Place NE culvert. The remainder of the sidewalk/trail section to the 162nd Avenue NE intersection will be designed and constructed by others. Pre-construction tasks will include coordination with affected property owners, and utilities.

The roadway improvements will include one travel lane in each direction, a left-turn lane in selected areas, class II bicycle lanes, a sidewalk on the south side of the road and a sidewalk/multi-use trail on the north side of the roadway. Supporting these improvements will include slope restoration (a combination of walls and embankment), storm drainage and roadside safety elements. Formal landscaping adjacent to the street will be deferred until automatic irrigation is installed. Spare conduits for irrigation sleeves will be provided. The project will require right-of-way acquisition.

As a part of the project and consistent with NE 116th Street corridor plan, roadway profile adjustments will be examined to the east of 169th Avenue NE, (approximately 500-feet). Slope and utility impacts and associated costs with the profile revision will be examined. For this area of improvements, the existing two-lane pavement width will not change. Installation of pedestrian, bicycle and frontage improvements will be constructed during a future project.

The Consultant will use the current *City of Redmond Design Standards, Community Development Guidelines* and applicable stormwater management criteria in preparing the preliminary engineering. The roadway design will be prepared in accordance with the *2001 AASHTO Geometric Design of Highways and Streets Manual.*

The Consultant will operate in a manner similar to the City while preparing necessary contract documents.

The City shall provide support services to the Consultant as described in the following text. The Consultant will cooperate and coordinate with the City to facilitate the project.

Following is an outline of the work tasks:

- Project Management and Administration
- Project Initiation
- Investigation and Data Collection
- Survey & Right-of-Way
- Coordination
- Environmental
- Preliminary Design
- Final Design
- Public Involvement
- Bid Assistance Services

II. SCOPE OF SERVICES

A. Project Management and Administration

The Consultant will provide project administration and coordination with the City and subconsultants to facilitate efficient progress and timely completion of the project elements and phases.

The Consultant will track milestone dates, coordinate efforts of the design team, meet regularly with City staff (eight progress meetings and other meetings as defined in the scope), prepare subconsultant agreements and submit monthly progress reports and invoices. The Consultant will document all meetings, telephone conversations and emails. The Consultant will also develop and implement a quality assurance program.

B. Project Initiation

1. Kickoff Meeting

The Consultant will conduct a meeting to review the project background and requirements, which may include project objectives, task assignments, schedule, budgetary constraints, the communication plan, administrative procedures, quality control procedures, and design standards.

2. Design Workshop

The Consultant will participate in a design workshop with the City staff. The workshop is intended to include the other City departments (Public Works divisions of transportation, water, sewer, stormwater, natural resources, engineering, and construction engineering, and from the Planning and Parks Departments) to discuss the project elements, schedule, and to gather their concerns that may affect the design of the project.

3. Establish Schedule

The Consultant will prepare a project schedule showing major tasks reflecting the anticipated project duration, including the preliminary design, the final design, and the construction phase.

C. Investigation and Data Collection

1. Engineering Site Reconnaissance

The Consultant will conduct one site visit to identify the existing characteristics and design challenges. Findings from previous studies will be reviewed and compared to the current conditions. The City and agency representatives may participate in the site visit and share project relevant information and concerns. The Consultant will also photograph the project site. One copy of the photographs will be produced for the City. The Consultant will prepare a memorandum to summarize the discussions and observations.

2. Utilities Data Acquisition

The Consultant will contact the utility agencies that have facilities within the project limits and obtain record drawings and plans for proposed system improvements. The Consultant will incorporate this information into the base mapping and design.

3. Drainage Analysis

The design analysis will examine the collection and routing of stormwater flows between 162nd Avenue NE and 169th Court NE. Detention and water quality will be provided by retrofitting the existing pond at the Northstar plat. Between 162nd Avenue NE and 169th Avenue NE intersections, the detention and water quality system will be sized to accommodate only those portions of the NE 116th Street that are currently not treated or detained and that are conveyed to the Northstar pond. As a part of the analysis, if it determined that additional stormwater can be accommodated in the Northstar Pond, additional drainage from NE 116th Street will be collected and routed to the pond. The methodology will follow the criteria used for the design of the Northstar pond, as described in the April 2000 Stormwater Report for the Northstar development.

4. Investigation and Data Collection – Geotechnical Analysis

The Consultant will compile and review available information related to the project. The information will include published geologic maps, reports, topographic maps, and information that the City or County may have.

During the preliminary engineering phase, The Consultant will initiate geotechnical investigations of the project vicinity. The Consultant will evaluate soil conditions in the vicinity of the proposed walls/embankments to develop geotechnical engineering recommendations for design and to consider issues related to construction of the proposed improvements.

The Consultant will conduct a reconnaissance in the vicinity of the project site and collect information on the general nature and physical features of the site. Subsurface soil and groundwater conditions in the vicinity of the proposed improvements will be evaluated with twogeotechnical borings to a maximum depth of 20- feet. The borings will be advanced in the roadway adjacent to the proposed walls. The Consultant will arrange for underground utility location ("call before you dig") and obtain a street use permit from the City prior to performing field activities. For work within the street, the Consultant will develop a traffic control plan and provide necessary flaggers and traffic control.

The Consultant will obtain and test representative soil samples from the borings. The laboratory testing will consist of detailed visual classification, moisture content, and grain size distribution

tests and/or Atterberg limits (plasticity characteristics) depending on soil conditions encountered. For cost estimating purposes, the Consultant has assumed that the laboratory testing program will include 12 moisture content determinations and four grain size distribution and/or Atterberg limits tests.

The Consultant will conduct engineering analyses to develop design criteria and recommendations based on the results of their review of existing information, field explorations, and laboratory testing. The Consultant will develop engineering conclusions and recommendations for design and construction of the proposed improvements. The findings and recommendations will be summarized in a written draft and final report. The Consultant will submit three copies of the final geotechnical report to the City for its records. The report will contain the following:

- A site plan depicting the approximate locations of the boring and the locations of pertinent physical and geological features. The mapped boring log locations will be related to survey control points.
- Boring logs with soil descriptions and the results of the field and laboratory tests.
- A discussion of near-surface soil and groundwater conditions observed in the vicinity of the project site.
- Evaluation of the feasibility of the planned improvements from a geotechnical perspective.
- Evaluation of the moisture sensitivity of the onsite soils.
- Recommendations for subgrade preparation for new pavement sections and sidewalks, including reuse of site soil, and criteria for selection, placement, and compaction of structural fill.
- Recommendations related to maximum allowable slopes for temporary and permanent cut slopes.
- Evaluation of appropriate types of retaining structures, including segmental concrete block, cast-in-place concrete wall, and cantilevered soldier pile wall.

- Recommendations for retaining wall design, including static and dynamic lateral earth pressures and foundation requirements.

- Recommendations for retrofitting the existing pond at the Northstar plat. For cost estimating purposes, the Consultant has assumed that the berm around the pond will be raised no more than about 2 ft.

- Recommendations related to utility trench excavation and support.

- Recommendations for geotechnical monitoring and consultation during construction.

D. Survey

1. Existing Mapping

The Consultant will merge previously prepared topographic mapping for the project area into the mapping for the culvert replacement.

2. Topography Survey/Base Map

The Consultant will collect ground survey data to reflect current site conditions and merge this information into the base map. The survey limits are from 167th Place NE to Station 38+50, on the south side of the road only. The remainder of the base mapping will be obtained from the City. This information will be used to develop the sidewalk and wall design. The survey will extend from the face of south curb/edge of pavement to 20-feet beyond the south right-of-way.

The City furnished record drawing information will supplement the base map.

The survey will be tied to the City's horizontal and vertical monumentation system. The mapping will include 2-foot contour intervals. The mapping will also include symbolic representation of natural and man-made features, and such written labels as are necessary to clarify the identity of the features and provide supplemental information that may be necessary in the analysis and design phases of the project. Cross sections will be assembled from the survey base map. The map will be prepared to conform

to the City's mapping standards and will be prepared in AutoCAD. The Consultant will provide a copy of the map, printed and on electronic media, to the City.

The Consultant will arrange for Applied Professional Services (APS) to mark the existing utilities in advance of the Consultant's field survey. APS will also pothole utilities for confirmation of depth and location at selected locations, as decided by the Consultant and City. The Consultant will survey the data pins installed by APS.

3. Right-of-Way Research

The Consultant will research City and King County records (deeds, plats, surveys, and short plats) and collect information to determine the extent and nature of the existing right-of-way for the project vicinity. The City shall provide available existing right-of-way information, mapping, and title reports. Such data will be collected as needed to prepare the right-of-way map.

4. Right-of-Way Plan/Legal Descriptions

The Consultant will prepare a right-of-way map, a maximum of four legal descriptions of right-of-way takes, and four legal descriptions of permanent utility/sidewalk easements. The City shall furnish title reports for the affected parcels. The right-of-way map will delineate the road right-of-way and include abutting parcels identified by parcel number and owner's name, utility easements, and other property rights disclosed by title reports. The Consultant will annotate the map to include the necessary right-of-way takes, remainders, and easements for the project. The right-of-way map will be prepared in accordance with the City's standards and under the supervision of a Professional Land Surveyor. Individual right-of-way maps will be prepared for each parcel, on 8-1/2" x 11" sheets.

The Consultant will furnish electronic copies of the legal descriptions for use by the City.

This scope of work does not include property appraisals or negotiations with property owners for right-of-way takes or easements. These tasks shall be performed by the City.

E. Coordination

1. Coordination with Utility Agencies

The Consultant will contact Puget Sound Energy, Verizon, Comcast, Lake Washington School District, and AT&T Broadband regarding the future conversion of overhead facilities to underground installations and the removal of the utility poles. A maximum of three meetings are assumed.

The Consultant will meet with City representatives to identify those water and sewer utilities requiring extensions/service stubs, adjustments and modifications. A maximum of two meetings are assumed

2. Coordination with Permit Agencies

In conjunction with the culvert replacement project, the Consultant will contact the permit agencies to review the permit status.

3. Coordination with City

The Consultant will meet with affected City departments to discuss project elements relative to the roadway section, storm drainage, landscaping and interface with the on-going NE 116th Street Corridor Study. A maximum of four meetings are assumed.

F. Environmental

Previously prepared environmental documentation will be used for this project. No additional environmental tasks are included. If the previously prepared environmental documentation is not adequate for this project, additional scope and fee will be required to prepare the necessary revisions to the previously prepared environmental documentation.

G. Preliminary Design

The preliminary design will be based on the City-approved NE 116th Street corridor plan. Review and examination of the roadway profile and channelization is not included-profile recommendations contained in the corridor study will be utilized with the design, except for the revisions to the existing sag curve at the culvert. At this location, the sag curve will be modified to increase stopping sight distance. Recommendations from affected City departments, and input gathered during the design workshop will also be incorporated into the preliminary design.

1. Design Memorandum

The Consultant will examine design element alternatives and present the findings in a design memorandum. The design elements will include:

- Wall Alternatives

  For the wall located between 167th Place NE and 169th Avenue NE, on the south side NE 116th Street, wall alternatives will be examined and cost estimates will be prepared. The City Shall furnish sample plans for the wall fascia treatment. The wall types to be examined will include a solder pile wall and block retaining walls.

- NE 116th Street, Profile Revisions

  The impacts and associated costs to construct the roadway profile adjustment east of 169th Avenue NE will be examined. Affected elements will be defined and recommendations will be formed.

- Stormwater Management

  The Consultant will prepare stormwater technical documents that will include the findings of the drainage analysis.

- Culvert Selection

  The memorandum for the culvert selection will be merged into the design memorandum.

  The Consultant will meet with the City to discuss the design memorandum, collect comments, and submit a final design memorandum.

2. Cover and Information Sheet

The Consultant will prepare a cover sheet for the design set to include:

- Project title and project number
- Vicinity map
- Drawing index

3. Traffic Control Plans

The traffic control plan prepared for the culvert replacement project will be incorporated into the project.

4. Temporary Erosion Control Plan

The Consultant will prepare a temporary erosion control plan detailing the construction activity and features for control of sedimentation. The design will be in accordance with the *City of Redmond Clearing, Grading and Stormwater Management Technical Notebook* and requirements as defined in the culvert replacement HPA.

5. Typical Roadway Sections

The Consultant will prepare drawings of typical roadway cross sections. The drawings will include:

- Lane dimensions
- Sidewalk/trail dimensions
- Right-of-way dimensions (existing and proposed)
- Easement dimensions
- Cut and fill slope notations
- Pavement layer types and depths

6. Roadway, Storm Drainage Design, and Sanitary Sewer

The Consultant will prepare the horizontal and vertical alignment designs for the roadway and the storm drainage system.

Roadway Improvements Limits of Work:

- North Side of NE 116th Street

  The project will connect to the frontage improvements associated with the Northstar Development and will extend west to the limit of roadway disturbance required for the culvert replacement, plus length for transitions, approximately 400 west of the NE 116th Street, culvert.

- South Side of NE 116th Street

The improvements on the south side of the road will extend from 162nd Avenue NE to 169th Avenue NE. Infill behind existing curb and gutter installed by others will be included.

The plans will include:

- Base mapping
- Existing right-of-way, easements, and property lines
- Right-of-way and construction center lines
- Proposed right-of-way
- Cut and fill slope limits
- Wall locations
- Curb, gutter, and sidewalk
- Lane dimensions
- Construction notes
- General notes
- Datum
- Project benchmarks
- Curve and alignment data
- Drainage features (swales, pipes, culverts)
- Driveway aprons
- Mailbox locations
- Roadside planting and irrigation
- Existing utility lines as verified by field investigation
- Proposed utilities

The profiles will include:

- Existing roadway ground-line profile
- Proposed roadway construction center line profile
- Proposed storm drain system profile
- Profile grid
- Vertical datum
- Storm drain system construction notes
- Utility crossings of the storm drain lines
- Storm system structures, invert top elevations, connecting pipes with their lengths, slopes, and diameters annotated
- Proposed utilities

The horizontal scale of the drawings will be 1" = 20'.
The vertical scale will be no less than 1" = 2'.

7. Retaining Walls

The Consultant will prepare elevations and typical cross section for a maximum of two walls. One wall is located on the south side of the road, between 167th Place NE and 169th Avenue NE. The second wall is located east of 169th Avenue NE, which will facilitate lowering of the roadway profile grade, if required..

8. Landscaping

The Consultant will prepare plans for the restoration of side slopes using a mixture of approved street trees (if required) and seeding. Landscaping of the planter strips is not included. These areas will receive a bark mulch treatment.

Spare conduits and sleeves will be placed for future irrigation needs.

9. Channelization and Signing Plans

The Consultant will prepare channelization and signing plans for the area of improvements.

The plans will include:

- Pavement striping markings
- Dimensions of lanes and shoulders
- Existing and proposed right-of-way
- Signs and a schedule of signs
- Details
- Construction notes
- General notes

The horizontal scale of the drawings will be 1" = 20'.

10. Illumination and Underground Utility Conversion

The Consultant will prepare plans that will incorporate the general schematic layout of the overhead utilities that will be relocated underground. Conversion plans will be furnished by PSE, Comcast, and Verizon. The Consultant will examine the clearance to existing utilities and portray the profile requirements on the plans.

The City shall furnish the conversion agreement for each utility that will detail the approach to utility relocation and the division of work between the City contractor and the utility forces.

The Consultant will also provide design to relocate existing illumination and incorporate addition illumination as needed to meet standards. Where practical, illumination conduits will be placed in the conversion trench.

11. Quantity Tabulation and Opinion of Probable Construction Costs

The Consultant will prepare an opinion of probable construction costs based on the preliminary design. The opinion will include appropriate design contingencies. Right-of-way unit costs shall be provided by the City.

12. Outline Specifications

The City shall provide an electronic copy of representative City accepted specifications for necessary general conditions, supplementary general conditions, special provisions, and proposal contents. The Consultant will prepare the appropriate technical specifications outline for the project.

13. Constructability Review

The Consultant will examine the project site to check the final drawings. The examination will include checks for accuracy, constructability, and conflicts. The drawings will be revised as necessary.

14. Submit 60 Percent Documents

The Consultant will package the documents for review by the City. The Consultant will submit eight half-size sets and two full-size sets of blackline prints of the 60 percent complete design drawings, and five copies of the outline specifications, bid schedule, and the opinion of probable construction costs to the City three weeks in advance of a review meeting.

15. Meet with the City to Review 60 Percent Design

At the review meeting, the Consultant will discuss the documents with the City and respond to the City's review comments. The

plans will be submitted to affected utilities for comments prior to meeting with City staff.

H. Final Design (90 Percent and 100 Percent)

The final design will be based on the City approved 60 percent complete preliminary engineering design. All final engineering drawings will be prepared with ink on Mylar®. Drawing dimensions will be 22 inches wide by 34 inches long with standard City title block. The details and requirements for each element are defined in the preliminary design documents.

1. Cover and Information Sheet

   The Consultant will finalize the cover sheet for the design set.

2. Traffic Control Plans

   The Consultant will insert the final traffic control plans.

3. Temporary Erosion Control Plan

   The Consultant will prepare the final temporary erosion control plans.

4. Typical Roadway Cross Sections

   The Consultant will prepare the final typical roadway cross sections.

5. Roadway and Storm Drainage Design

   The Consultant will prepare the final horizontal and vertical alignment designs for the roadway and the storm drainage system.

6. Retaining Wall Elevation

   The Consultant will prepare the final wall elevations and typical cross section and details for a maximum of two walls.

7. Landscaping

   The Consultant will prepare the final landscaping plans.

8. Channelization and Signing Plans

The Consultant will prepare the final channelization and signing plans.

9. Illumination and Underground Utility Conversion

The Consultant will prepare the final plans denoting the underground conversion and illumination system.

10. Project Technical Specifications

The Consultant will prepare the final general and special provisions based on the 2004 *Washington State Department of Transportation Standards for Road, Bridge, and Municipal Construction*. The contents will include the proposal items (separate bid schedules for each section of the project), the City's general conditions, and supplemental general conditions, amendments to the standard specifications, special provisions, and standard plans. Each pay item will be described in the special provisions. The City's review comments pertaining to the outline specifications will be addressed in preparing the final document. The special provisions will further address those items of work not sufficiently detailed by the APWA and *Washington State Standard Specifications.*

11. Quantity Tabulation and Cost Estimate

The Consultant will prepare a final opinion of probable construction costs based on the final design. The opinion will include appropriate contingencies, and waste and compaction factors.

12. Submit 90 Percent and 100 Percent Documents for City Review

The Consultant will submit one set of full-size and eight sets of half-size blackline prints of the 90 and 100 percent design drawings and five copies of the specifications, quantity tabulation, and opinion of probable costs to the City three weeks in advance of a review meeting

13. Meet with the City to Review 90 Percent and 100 Percent Design Documents

At the review meeting, the Consultant will discuss the documents with the City and respond to the City's review comments.

14. Finalize Construction Bid Documents

The Consultant will submit the final original documents of the plans, specifications, and opinion of probable costs to the City as follows:

- 40 sets of half-size plans
- 10 sets of full-size plans
- 40 copies of the contract provisions (specifications)
- The original full-size Mylar® drawings bearing the engineer's stamp and seal on each drawing
- The printed paper version of the specifications
- The printed paper version of the final quantity and opinion of probable construction costs
- One copy of all survey notes prepared by the Consultant
- One copy of the design calculations
- Three copies of the design cross sections

I. Public Involvement

1. Open Houses Meeting

The Consultant will prepare for one open house. The City shall provide the facility for the open house, distribute invitations, and provide coordination with the property owners. The Consultant will furnish presentation materials and participate in the open house meeting.

2. Newsletter

The Constant will prepare two newsletters. The City shall distribute the newsletters.

3. Right-of-Way

The Consultant will coordinate with the City Real Estate staff to ensure the documentation for the acquisitions is prepared in accordance with the City requirements.

J. Bid Assistance Services

The Consultant will assist the City in soliciting and evaluating construction bids. Anticipated services include:

1. Pre-bid Meeting

   The Consultant will prepare for and attend the pre-bid meeting, if requested. The Consultant will prepare and submit a list of attendees and significant comments and questions. The Consultant will coordinate with City staff in follow up to questions, as needed.

2. Document Interpretation

   The Consultant will assist the City as requested with interpretation of the contract documents during bidding.

3. Addendum Preparation

   The Consultant will assist the City, as requested, with the preparation of required addenda, if necessary.

4. Bid Evaluation.

   The Consultant will assist the City staff, as requested, in the evaluation of contractor bids and awarding of the construction contract. Assistance will include contacting low bidder references and preparing an award recommendation letter.

   The City shall schedule pre-bid and pre-construction conferences, issue advertisement for bids and pay advertisement costs, distribute and track contract document distribution, collect document fees, accept and process questions from bidders, distribute addenda and pay related distribution costs, attend and facilitate bid opening, and prepare and distribute bid tabulation.

K. Construction Administration

The Consultant can provide on-call support during the construction phase of the project. This effort may include checking of contractor references, review of bids, attending weekly progress meetings, reviewing shop drawings and payment requests, responding to Contractor questions, and modifications of the plans. A separate scope and fee can be developed for these services as requested by the City.

EXHIBIT B-1
CITY OF REDMOND
NE 116th St. Culvert Replacement and Roadway Improvements
CONSULTANT FEE DETERMINATION

NEGOTIATED HOURLY RATES:

Classification	Hours		Rate	=	Cost
Project Principal	28	X	$180		$5,040
Principal Survey	17	X	$137		$2,329
Project Manager	327	X	$152		$49,704
Project Surveyor	31	X	$100		$3,100
Project Engineer	269	X	$106		$28,514
Design Engineer	595	X	$81		$48,195
Senior Designer	86	X	$89		$7,654
Senior Technician	644	X	$66		$42,504
Technician	16	X	$66		$1,056
Project Administrator	14	X	$68		$952
Survey Crew (2 person)	44	X	$152		$6,688
Word Processor	27	X	$88		$2,376
				TOTAL	$198,112

REIMBURSABLES:

Mileage (30 trips x 50 miles @ $0.375/mile)=	$563	
Copying/Blueprints	$3,500	
Traffic Control/Flagging	$500	
APS	$1,500	
		$6,063

SUBCONSULTANT COST (See Exhibit C-1)	=	$17,700
TOTAL	=	$221,875
Contingency	=	$13,125
GRAND TOTAL	=	$235,000

EXHIBIT C
CITY OF REDMOND
NE 116th St. Roadway Improvements Project Ph 1A : 169th Profile Adjustment
CONSULTANT FEE DETERMINATION

NEGOTIATED HOURLY RATES:

Classification	Hours		Rate	=	Cost
Project Principal	14	X	$180		$2,520
Principal Survey	0	X	$137		$0
Project Manager	56	X	$152		$8,512
Project Surveyor	0	X	$100		$0
Project Engineer	87	X	$106		$9,222
Design Engineer	165	X	$81		$13,365
Senior Designer	0	X	$89		$0
Senior Technician	224	X	$66		$14,784
Technician	0	X	$66		$0
Project Administrator	0	X	$68		$0
Survey Crew (2 person)	0	X	$152		$0
Word Processor	0	X	$88		$0
				TOTAL	$48,403

REIMBURSABLES:

Mileage (0 trips x 50 miles @ $0.375/mile)=	$0	
Copying/Blueprints	$1,500	
Traffic Control/Flagging	$0	
APS	$0	
		$1,500

SUBCONSULTANT COST (See Exhibit D)	=	$0
TOTAL	=	$49,903

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EXHIBIT C
CITY OF REDMOND
NE 116th St. Roadway Improvements Project Ph 1A : 162nd Ave NE to 167th Pl NE
CONSULTANT FEE DETERMINATION

NEGOTIATED HOURLY RATES:

Classification	Hours		Rate	=	Cost
Project Principal	14	X	$180		$2,520
Principal Survey	17	X	$137		$2,329
Project Manager	271	X	$152		$41,192
Project Surveyor	31	X	$100		$3,100
Project Engineer	182	X	$106		$19,292
Design Engineer	430	X	$81		$34,830
Senior Designer	86	X	$89		$7,654
Senior Technician	420	X	$66		$27,720
Technician	16	X	$66		$1,056
Project Administrator	14	X	$68		$952
Survey Crew (2 person)	44	X	$152		$6,688
Word Processor	27	X	$88		$2,376
				TOTAL	$149,709

REIMBURSABLES:

Mileage (30 trips x 50 miles @ $0.375/mile)=	$563	
Copying/Blueprints	$2,000	
Traffic Control/Flagging	$500	
APS	$1,500	
		$4,563

SUBCONSULTANT COST (See Exhibit D)	=	$17,700
TOTAL	=	$171,972
CONTINGENCIES:	=	$4,000
GRAND TOTAL:	=	$175,972

EXHIBIT D

EXHIBIT C-1
CITY OF REDMOND
NE 116th Street Culvert Replacement and Corridor Improvements Project
Subcontracted Work

The CITY permits subcontracts for the following portions of the work of the AGREEMENT:

SUBCONTRACTOR	WORK DESCRIPTION	AMOUNT
Landau Associates	Geotechnical	$17,700
	TOTAL =	$17,700